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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/837,739	04/22/97	ARUMIN	81042

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EXAMINER
HUYNH, K

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 10/05/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/837,739

Applicant(s)

Aromin

Examiner

Kim Huynh

Group Art Unit

2836



☒ Responsive to communication(s) filed on Aug 13, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-11 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-9 and 11 is/are rejected.

☒ Claim(s) 10 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Aug 13, 1998 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

2. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by McDonald et al. (US Pat. No. 5,661,623). McDonald et al. disclose an appliance leakage current interrupter (Figure 7) comprising a circuit breaker having a pair of switches (44,46), a relay circuit (180), a fault detection circuit (212, 52, and 54) comprising an integrated chip (212) and a transformer (52, 54), a single sided circuit board (Figure 5, 42) having pattern of conductive path and said integrated circuit chip is surface mounted on the second side (lower portion) of the circuit board and the transformer and the relay on the first side (upper portion) of the circuit board (Figure 5, column 10, lines 22-40).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald et al. (US Pat. No. 5,661,623).

a. Regarding claim 2, McDonald further discloses said transformer including a common core (220, 222), a primary winding, and a secondary winding (224, 226). However, McDonald et al. does not specifically disclose the transformer having three laminated layers and the primary winding being wrapped twice around the core of the transformer. It would have been obvious to one having ordinary skill in the art to modify the primary winding of the transformer to minimize the dimensions of the appliance leakage current interrupter (abstract, last 2 lines) which is not a matter of ordinary invention (see In re Yount, 80 USPQ 141).

b. Regarding claims 3 and 4, McDonald further discloses the appliance leakage current interrupter (Figures 1-5) comprising generally rectangular-shaped housing (10) being mounted on an end of an electrical cord (40); a prong assembly (Figure 2) comprising a pair of contact prongs (22,24) which extend through said housing and a pair of conductive bracket arms (Figure 5, 44 and 46).

c. Regarding claims 5, McDonald does not specifically disclose the pair of prongs extended out from said housing at an angle of 180 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the prongs to extend

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at an angle of 180 degrees to provide an appliance leakage current interrupter which is relatively small and compact, allowing it to be incorporated into an AC line cord plug (column 2, lines 46-49) since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

d. Regarding claims 6, McDonald et al. further disclose the pair of prongs extended out from said housing at an angle of 90 degrees from the longitudinal axis of the cord (Figure 2).

e. Regarding claims 7-9, McDonald further discloses a power supply circuit 204 for providing alternating current to the integrated circuit chip 212, said power supply circuit comprising a metal oxide varistor 202, a test circuit (34, 258); and said relay circuit comprises a solenoid 180 and a rectifier 214 column 10, lines 47-50 and the portion of claim 1, column 17, line 65 through column 18, line 6), and a resetting assembly 36 for resetting said appliance leakage current interrupter after detection of a ground fault.

Response to Arguments

5. Applicant's arguments filed 08/13/98 have been fully considered but they are not persuasive.

6. The applicant argues that the pair of switches 44 and 46 are not normally closed switches (claims 1 and 9), the examiner disagrees. McDonald discloses that the pair of switches are automatically closed whenever power is applied to the AC input terminals (column 10, lines 47-50 and the portion of claim 1, column 17, line 65 through column 18, line 6). It means when in

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normal condition (the device is in operation and no fault presents), the switches are closed and only open when a fault is detected. This is the same as the switches disclosed by the applicant.

7. The applicant argues that McDonald does not teach or suggest mounting an IC chip on the second side of a circuit board and the relay coil and transformer on the first side, the examiner disagrees. McDonald discloses in Figure 5 and column 10, lines 22-40 that power supply (which includes the transformer 52 and 54 and the relay 180 as in Figure 5) is mounted on the upper portion of the circuit board 42 and the integrated circuits and other sensitive components on the lower part to prevent isolate interferences caused by the relay coil.

8. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (claim 2), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

9. Regarding claims 5, applicant argue that McDonald does not specifically disclose the pair of prongs extended out from said housing at an angle of 180 degrees. However, the examiner set forth the PRIMA FACIE case of obviousness to modify the device of McDonald to provide an appliance leakage current interrupter which is relatively small and compact, allowing it to be incorporated into an AC line cord plug. It is the applicant's responsibility to show that the plug

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position is a patentable feature and further that some unobvious or unexpected result is obtained therefrom. Furthermore, it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

10. The examiner withdraws the rejection of claim 10 upon further review of its limitation.

Allowable Subject Matter

11. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703) 308-1678. If attempts to reach the above noted examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached at (703) 308-3301.


Jeffrey Gaffin
Supervisory Patent Examiner
Technology Center 2800

KH

September 26, 1998